

RESEARCH, DEVELOPMENT & TECHNOLOGY TRANSFER QUARTERLY PROGRESS REPORT

Wisconsin Department of Transportation
DT1241 02/2011

INSTRUCTIONS:

Research project investigators and/or project managers should complete a quarterly progress report (QPR) for each calendar quarter during which the projects are active.

WisDOT research program category: <input type="checkbox"/> Policy research <input type="checkbox"/> Other <input checked="" type="checkbox"/> Wisconsin Highway Research Program <input type="checkbox"/> Pooled fund TPF#		Report period year: 2011 <input type="checkbox"/> Quarter 1 (Jan 1 – Mar 31) <input checked="" type="checkbox"/> Quarter 2 (Apr 1 – Jun 30) <input type="checkbox"/> Quarter 3 (Jul 1 – Sep 30) <input type="checkbox"/> Quarter 4 (Oct 1 – Dec 31)
Project title: Aesthetic Coatings for Bridge Components		
Project investigator: Dr. Al Ghorbanpoor	Phone: 414-229-4962	E-mail: algh@uwm.edu
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WisDOT contact: Travis McDaniel	Phone: 608-266-5097	E-mail: travis.mcdaniel@dot.state.wi.us
WisDOT project ID: 0092-11-07	Other project ID:	Project start date: 10/21/2010
Original end date: 10/20/2012	Current end date: 10/20/2012	Number of extensions: 0

Project schedule status:

☒ On schedule ☐ On revised schedule ☐ Ahead of schedule ☐ Behind schedule

Project budget status:

Total Project Budget	Expenditures Current Quarter	Total Expenditures	% Funds Expended	% Work Completed
\$120,000.00	\$6,000.00	\$14,000.00	12%	20%

Project description:

The objectives of this study are to investigate methods and products that may be used in the aesthetic and protection coating of bridge components and to develop a guideline for cost-effective bridge coating practices. It is envisioned that a series of coating systems for both steel and concrete will be identified and tested in the laboratory to evaluate their performance under simulated environmental conditions that are similar to those experienced by bridge components in Wisconsin. Wisconsin bridge sites, where coating failures and problems have occurred, will be visited to identify and evaluate the structural details and other factors that have contributed to such coating failures. Upon completion of the testing and evaluation program, guidelines and specifications language will be developed for selection, application, and maintenance of such coating materials. Also, recommendations will be made to WisDOT for implementation of the results of this study.

Progress this quarter (includes meetings, work plan status, contract status, significant progress, etc.):

The research staff has continued the review of available literature concerning standards, guidelines, materials, preparation, application, structural details, coating testing procedures and standards, and long term performance of various coating materials for highway bridges and similar applications. Questionnaires were sent out to manufactures, regional Wisconsin DOT branches, and other State DOT. The results for these surveys were obtained and reviewed. Additional coatings systems were identified from the questionnaires received by the manufactures and State DOT's.

Additional information has been gathered on the structural details of specific decorative hand railings used on WisDOT bridges. A field visit was made to three bridges located in Baraboo, Jefferson, and Sauk City. During these visits

the railings and concrete coatings were examined. Problems and successes in the coating systems were identified on each of the bridges and discussed in the interim report.

All testing facilities and equipment have been setup and are being prepared for the testing phase to begin. A series of coatings for accelerated testing has been identified and summarized for both steel and concrete substrates. An interim report has been prepared that includes a list of these coatings. An updated testing program has been established to complete the laboratory testing for the selected coatings.

Anticipated work next quarter:

The research staff will work with the DOT to narrow down the coating systems to the proposed 10 systems to be tested. Once the specific coating systems are selected the samples with coating systems will be fabricated. After preparing the coating samples, the laboratory testing phase will begin. Additionally, the research staff would like to identify at least two more bridges for review of the coating systems.

Circumstances affecting project or budget:

None.

Attach / insert Gantt chart and other project documentation

Quarters/Tasks	1	2	3	4	5	6	7	8
1. Literature Review	_____							
2. Survey	_____							
3. Interim Report	_____							
4. Laboratory Testing			_____	_____	_____	_____	_____	_____
5. Future Research						_____		
6. Guidelines/Specs						_____		
7. Draft Final report						_____		
8. Final Report							_____	

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Staff receiving QPR:	Date received:
Staff approving QPR:	Date approved: